UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,779	01/26/2001	Simon H. Corston-Oliver	M61.12-0682	7875

			EXAMINER
27366	7590	09/06/2005	WOZNIAK, JAMES S

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ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *   c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 5/23/2005, the applicant has submitted a request for

continued examination, filed 6/14/2005, amending claims 1-7, -10, 19-28, and 30-31, while

arguing to traverse the art rejection based on the amended limitations *(Amendment, Page 8)*. The

applicant's arguments have been fully considered but are moot with respect to the new grounds

of rejection in view of Kudrolli et al *(U.S. Patent: 6,279,018)*.

Claim Objections

2.   **Claims 1-18** are objected to because of the following informalities:

In Claim 1, Lines 7-8, "each of the compression options a comprising different

compressed form of an instance of the portion in the body of text" should be changed to –each of

the compression options comprising a different compressed form of an instance of the portion in

the body of text--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   **Claims 1-17 and 19-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Grefenstette *(U.S. Patent: 6,289,304)* in view of Kudrolli et al *(U.S. Patent: 6,279,018)*.

With respect to **Claims 1 and 25**, Grefenstette discloses:

Performing a linguistic analysis on the body of text to obtain a linguistic output indicative

of linguistic components of the body of text *(part-of-speech analysis and tagging, Col. 7, Lines

25-43)*; and

Automatically generating a plurality of compression options for each of a plurality of

different portions of the body of text to compress the body of text based on the linguistic output

*(compression techniques based on part-of-speech tagging and reduction levels, wherein different

parts of speech (text portions) within a body of text have different compression options at a

particular reduction level, Col. 7, Line 44- Col. 8, Line 64; and text summarization as an

automatic process, Col. 2, Lines 23-32).*

Grefenstette does not specifically disclose automatically generated compression options

that comprise a different compressed form of an instance of a text portion generated, however

Kudrolli teaches a text compression method and system that automatically compresses sentences

according to a set of rules that can be performed recurrently *(Col. 17, Lines 25-36; Col. 25, Line 63- Col. 26, Line 30; and Figs. 11-16).*

Grefenstette and Kudrolli are analogous art because they are from a similar field of endeavor in text compression/reduction. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette with the method for automatically generating a plurality of sentence compressions as taught by Kudrolli to shorten text until a desired size limit is reached to allow a user to view complete text documents on a display with limited space *(Col. 26, Lines 27-30 and Col. 1, Lines 56-67).*

With respect to **Claims 2 and 26,** Kudrolli further discloses various abbreviation rules *(Col. 17, Line 25- Col. 25, Line 44).*

With respect to **Claims 3 and 27,** Kudrolli discloses:

Subjecting each portion of the body of text to the different sets of compression rules in a predetermined order such that the compression options reflect varying degrees of compression of a same portion of the body of text *(Col. 33, Lines 9-42; Figs. 11-16).*

With respect to **Claims 4 and 28,** Kudrolli discloses:

Generating a compression identifier attribute indicative of at least one of the sets of compression rules to which the portion of the body of text is subjected *(Col. 29, Lines 28-40 and Fig. 11).*

With respect to **Claim 5,** Kudrolli discloses:

Generating a ShortForm attribute indicative of a compressed form of the portion of the body of text after application of the set of compression rules *(word abbreviations, Figs. 11-15).*

With respect to **Claim 6,** Kudrolli discloses:

Generating a case normalized attribute, based on the ShortForm attribute, indicative of a

CaseNormalizedForm of the ShortForm attribute *(word abbreviations having a first letter*

capitalized, Figs. 11-15).

With respect to **Claims 7 and 8**, Kudrolli discloses:

Applying letter removal rules to the case normalized attribute to remove letters based on

a predetermined location of the letters in the CaseNormalizedForm *(removal of vowels and*

consonants unnecessary for comprehension from abbreviated words to further reduce text size,

Figs. 11-15 and position of characters, Col. 15, Lines 54-56).

With respect to **Claim 9**, Grefenstette further shows:

Generating a LongForm attribute that reflects substantially no compression of the portion

of the body of text *(text format in which no reduction is performed, Fig. 5).*

With respect to **Claim 10**, Kudrolli discloses:

Setting the case normalized attribute and the compression attribute to the ShortForm

attribute *(abbreviation data file used to further reduce the size of text- for example, compressing*

ForYourInformation to FYI, Col. 23, Table 5).

With respect to **Claim 11**, Grefenstette further recites:

Applying the set of compression rules based on the syntactic analysis *(markers based on*

syntactic analysis, Col. 7, Lines 44-67, that act as a removal criterion for particular reduction

levels, Col. 8, Lines 1-64).

With respect to **Claim 12**, Grefenstette additionally recites:

Performing a lexical analysis on the body of text; and performing a morphological

analysis on the body of text *(part-of-speech analysis for determining a word group type and*

morphological analysis, Col. 7, Lines 25-43).

With respect to **Claim 13**, Kudrolli discloses:

Normalizing dates to a numerical form *(enumeration words to numeric digits conversion*

for dates in the case of a non-numeric data input, Col. 42, Lines 46-54).

With respect to **Claim 14**, Grefenstette in view of Kudrolli teaches the text compression

technique utilizing part-of-speech tags to act as a removal criterion for particular reduction levels

and word abbreviations, as applied to Claim 5. Grefenstette in view of Kudrolli does not

specifically suggest the ability to interpret offset dates from a current date for text compression;

however, the examiner takes official notice that a grammar interpreter is a means well known in

the art for determining an offset date and producing a numerical equivalent. Therefore, it would

have been obvious to one of ordinary skill in the art, at the time of invention, to determine a

numerical equivalent of an offset date using a grammar interpreter in order to provide further text

compression for document display on a screen of limited size, to obtain the invention as specified

in Claim 14.

With respect to **Claims 15 and 16**, Kudrolli discloses:

Maintaining text fragments that cannot be accurately understood unless maintained fully

intact, in uncompressed form *(Col. 14, Line 66- Col. 15, Line 4).*

With respect to **Claim 17**, Grefenstette in view of Kudrolli teaches the Grefenstette

teaches the text compression technique in which symbol sensitive text fragments are maintained,

as applied to Claim 16. Grefenstette in view of Kudrolli does not specifically suggest that URLs

and email addresses are maintained in uncompressed form; however, the examiner takes official

notice that it is well known in the art to maintain symbol sensitive fragments (such as URLs and

email addresses) in text compression because the text would be altered if compressed, thus losing

an original meaning. Therefore, it would have been obvious to one of ordinary skill in the art, at

the time of invention, to maintain URLs and email addresses in text compression so as to prevent

loss or distortion of meaning, to obtain the invention as specified in Claim 17.

With respect to **Claim 19**, Grefenstette teaches the process of linguistic analysis utilizing

part-of-speech tagging in text compression as applied to Claims 1 and 25. Grefenstette does not

specifically disclose a data structure having different sections relating to a textual term

comprising a plurality of data fields representing a plurality of different compressed forms of the

textual term, however Kudrolli shows such a structure in Figs. 15-16.

Grefenstette and Kudrolli are analogous art because they are from a similar field of

endeavor in text compression/reduction. Thus, it would have been obvious to a person of

ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette with the

data structure having a plurality of term compressions as taught by Kudrolli to provide a means

of shortening text until a desired size limit is reached to allow a user to view complete text

documents on a display with limited space *(Col. 26, Lines 27-30 and Col. 1, Lines 56-67)*.

Claim 20 contains subject matter similar to Claim 4, and thus, is rejected for the same

reasons.

Claim 21 contains subject matter similar to Claim 5, and thus, is rejected for the same

reasons.

Claim 22 contains subject matter similar to Claim 6, and thus is rejected for the same

reasons.

Claim 23 contains subject matter similar to Claim 7, and thus is rejected for the same

reasons.

Claim 24 contains subject matter similar to Claim 9, and thus is rejected for the same

reasons.

Claims 29 and 30 contain subject matter similar to Claims 5-7, and thus, are rejected for

the same reasons.

Claim 31 contains subject matter similar to Claim 9, and thus, is rejected for the same

reasons.

5.   **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Grefenstette in

view of Kudrolli et al, and further in view of Marcu et al *(U.S. Patent Publication:*

2002/0046018).

With respect to **Claim 18**, Grefenstette in view of Kudrolli teaches the text compression

technique utilizing syntactic analysis, as applied to Claim 11. Although Grefenstette does teach

a syntactic analysis for inserting special markers identifying particular words or word groups

(Col. 7, Lines 44-67), no specific tree-based analysis is taught, however, Marcu teaches such a

tree based analysis for the application of compression rules:

Syntactic analysis includes a tree having non-terminal nodes representing multi-word

portions of the body of text and terminal nodes indicative of words in the body of text, and

wherein both the non-terminal nodes and the terminal nodes are examined for application of compression rules *(Paragraphs 176-195)*.

Grefenstette, Kudrolli, and Marcu are analogous art because they are from a similar field of endeavor in text compression processing. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette in view of Kudrolli with the use of a syntactic tree-based for text summarization as taught by Marcu in order to implement a more efficient and adaptive text compression method *(Marcu, Paragraphs 36-37)*.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Best *(U.S. Patent: 4,333,152)*- teaches a system that suggests abbreviations in lieu of entire phrases.
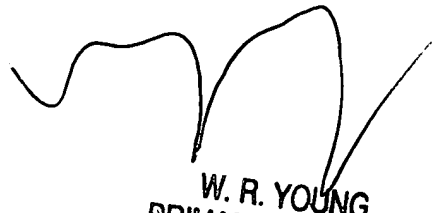
Sumita et al *(U.S. Patent: 5,907,841)*- teaches a method for generating document summaries and allowing a user to select a candidate summary from a collection generated using different compression rates.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
7/28/2005

W. R. YOUNG
PRIMARY EXAMINER